Abstracts

A new approach to amplifier linearization by the generalized baseband signal injection method

Chi-Shuen Leung, Kwok-Keung and M. Cheng. "A new approach to amplifier linearization by the generalized baseband signal injection method." 2002 Microwave and Wireless Components Letters 12.9 (Sep. 2002 [MWCL]): 336-338.

The authors present a new technique for the reduction of third-order intermodulation distortion (IMD) in microwave amplifiers. A baseband predistortion signal is injected into a diode circuitry and the main amplifier to mix with the fundamental to generate a canceling signal for the suppression of the inherent IMD component. The proposed method can achieve higher linearity performance, in comparison to the conventional difference-frequency approach, and unlike many other techniques, no RF circuitry, such as variable gain amplifiers and phase-shifters, is needed other than baseband amplifiers. Both two-tone and vector signal measurement results are included.

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